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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 10

Application Number: 09/982,481
Filing Date: October 17, 2001
Appellant(s): HAO ET AL.

Jonathan M. Harris
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/5/2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-30 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

The rejection of claims 31-32 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

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(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

5929863

Tabei

7-1999

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabei et al. U.S. Pat. No. 5,929,863 (hereinafter Tabei).

3. Claim 1:

Tabei teaches a method for arranging data, said method comprising:

Receiving said data comprising a plurality of records (column 3), each said record having a plurality of attributes (e.g., figure 3, 5, 11 and 12; column 8 and 10; a plurality of attributes for the first graph, the second graph in the same distribution graph);

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Determining a set of attributes selected from said plurality of attributes, said set of attributes (e.g., the plot colors; see column 8 and 10) for placement of said plurality of records (data records for database or files; see column 3) in a graphically displayable array (figure 3, 5, 11 and 12), said graphically displayable array comprising a plurality of adjacent data points (figure 3, 5, 11 and 12), each said data point representing one record of said plurality of records (e.g., figure 3, 5, 11 and 12; column 10, lines 4-67; column 11, lines 1-22);

Arranging said plurality of records to construct said graphically displayable array so that each of said adjacent data points is assigned a record (e.g., figure 3, 5, 11 and 12; column 10, lines 4-67; column 11, lines 1-22).

Claim 2:

The claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of said set attributes comprising at least one dividing attribute, a first ordering attribute corresponding to a first axis, a second ordering attribute corresponding to a second axis, and a visual indicator attribute corresponding to a visual indicator.

However, Tabei further discloses the claimed limitation of said set attributes comprising at least one dividing attribute, a first ordering attribute corresponding to a first axis, a second ordering attribute corresponding to a second axis, and a visual indicator attribute corresponding to a visual indicator (e.g., figures 11 and 12; column 10, lines 4-67; column 11, lines 1-22).

Claim 3:

The claim 3 encompasses the same scope of invention as that of claim 2 except additional claimed limitation that said step c) comprises sorting said plurality of records by a first dividing attribute, said first dividing attribute corresponding to said first axis, and partitioning said plurality of records into groups according to said first dividing attribute.

However, Tabei further discloses the claimed limitation of that said step c) comprises sorting said plurality of records by a first dividing attribute, said first dividing attribute corresponding to said first axis, and partitioning said plurality of records into groups according to said first dividing attribute (e.g., figures 11 and 12; column 10, lines 4-67; column 11, lines 1-22).

Claim 4:

The claim 4 encompasses the same scope of invention as that of claim 3 except additional claimed limitation of sorting said records of each said group according to said first ordering attribute and said second ordering attribute; and applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

However, Tabei further discloses the claimed limitation of sorting said records of each said group according to said first ordering attribute and said second ordering attribute; and applying said visual indicator to each of said plurality of records according to said visual indicator attribute (e.g., figures 11 and 12; column 10, lines 4-67; column 11, lines 1-22).

Claim 5:

The claim 5 encompasses the same scope of invention as that of claim 3 except additional claimed limitation of sorting said records of each of said groups according to a second dividing attribute, said second dividing attribute corresponding to said second axis, and portioning said

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records of each of said groups into sub-groups according to said second dividing attribute; sorting said records of each said sub-group according to said first ordering attribute and said second ordering attribute; and applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

However, Tabei further discloses the claimed limitation of sorting said records of each of said groups according to a second dividing attribute, said second dividing attribute corresponding to said second axis, and portioning said records of each of said groups into sub-groups according to said second dividing attribute; sorting said records of each said sub-group according to said first ordering attribute and said second ordering attribute; and applying said visual indicator to each of said plurality of records according to said visual indicator attribute (e.g., figures 11 and 12; column 10, lines 4-67; column 11, lines 1-22).

Claim 6:

The claim 6 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of each said data point being represented by a pixel on a display.

However, Tabei further discloses the claimed limitation of each said data point being represented by a pixel on a display (e.g., figure 12).

Claim 7:

The claim 7 encompasses the same scope of invention as that of claim 2 except additional claimed limitation of said first axis being a horizontal axis.

However, Tabei further discloses the claimed limitation of said first axis being a horizontal axis (e.g., figure 12).

Claim 8:

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The claim 8 encompasses the same scope of invention as that of claim 2 except additional claimed limitation of said second axis being a vertical axis.

However, Tabei further discloses the claimed limitation of said second axis being a vertical axis (e.g. figure 12).

Claim 9:

The claim 9 encompasses the same scope of invention as that of claim 2 except additional claimed limitation of said visual indicator being a color.

However, Tabei further discloses the claimed limitation of said visual indicator being a color (e.g., figure 12).

Claim 10:

The claim 10 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of said graphically displayable array being a pixel bar chart.

However, Tabei further discloses the claimed limitation of said graphically displayable array being a pixel bar chart (e.g., the distribution chart of figure 12).

4. Claim 11-20:

The claim 11-20 encompasses the same scope of invention as that of claims 1-10 except additional claimed limitation of a computer system comprising a bus, a display device coupled to said bus; a computer-readable memory coupled to said bus; and a processor coupled to said bus, said processor for executing a method for arranging data. However, Tabei further discloses the claimed limitation of a computer system comprising a bus, a display device coupled to said bus;

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a computer-readable memory coupled to said bus; and a processor coupled to said bus, said processor for executing a method for arranging data (e.g., figures 1 and 6).

5. Claim 21-30:

The claim 21-30 respectively encompasses the same scope of invention as that of claims 1-10 except additional claimed limitation of a computer-readable medium having computer-readable program code embodied therein for causing a computer system to perform a method for arraying data. However, Tabei further discloses the claimed limitation of a computer-readable medium having computer-readable program code embodied therein for causing a computer system to perform a method for arraying data (e.g., figures 1, 2 and 6; column 4, lines 5-10).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabei et al. U.S. Patent No. 5,929,863.

8. Claim 31:

The claim 31 recites the claimed limitation of "determining a width of each of the columns, the width of some columns being different than the width of other columns, assigning

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records to every pixel in said columns, and applying a variable color to all of the pixels in all of the columns according to an attribute of said records.”

Tabei teaches determining a width of each of the columns (display range designation; column 3), assigning records to every pixel in said columns (figure 3, 5, 11 and 12), and applying a variable color to all of the pixels in all of the columns (column 8) according to an attribute of said records (e.g., figure 3, 5, 11 and 12; column 10, lines 4-67; column 11, lines 1-22).

However, it is not clear Tabei discloses a variable width column in a distribution chart.

Tabei suggests a variable width column because Tabei teaches determining a minimum and maximum values and item data ranges for the x-axis and y-axis wherein the item data ranges are variably selected (column 3).

It would have been obvious to one of ordinary skill in the art to have incorporated the variable width column into the Tabei's invention to provide a variable width column for the different ranges of data records to be placed in the distribution charts.

9. Claim 32:

The claim 32 encompasses the same scope of invention as that of claim 31 except additional claimed limitation of “forming a plurality of pixel bar charts, each chart comprising a plurality of variable width columns, each column containing a variable number of pixels; assigning a record to a commonly located pixel in each chart; and applying a variable color to the pixels in each chart according to an attribute of said records, said attribute being different among the charts.”

Tabei teaches forming a plurality of pixel bar charts (column 6), each chart comprising a plurality of columns (figures 3, 5, 11 and 12), each column containing a variable number of pixels (figures 3, 5, 11 and 12); assigning a record to a commonly located pixel in each chart (column 3); and applying a variable color to the pixels in each chart according to an attribute of said records (column 8), said attribute being different among the charts (e.g., figure 3, 5, 11 and 12; column 10, lines 4-67; column 11, lines 1-22).

However, it is not clear Tabei discloses a variable width column in a distribution chart.

Tabei suggests a variable width column because Tabei teaches determining a minimum and maximum values and item data ranges for the x-axis and y-axis wherein the item data ranges are variably selected (column 3).

It would have been obvious to one of ordinary skill in the art to have incorporated the variable width column into the Tabei's invention to provide a variable width column for the different ranges of data records to be placed in the distribution charts.

(11) *Response to Argument*

In the remarks, the Appellant argued with respect to the claim 1 in substance:

(A) "Tabei does not teach or suggest a plurality of adjacent data points in which each adjacent data point is assigned a record. Tabei's Figure 11 (see above) shows various records plotted on a graph. The graph in Figure 11 comprises a plurality of adjacent data points (i.e., the sum total of all possible locations at which to plot a record), but not every possible data point in the graph is assigned a record. Many unassigned data points exist between the plotted records."

In response to the argument in (A), the Examiner asserts that Tabei teaches a plurality of adjacent data points in Figures 3-5 and 11-12 in which each adjacent data point (the adjacent data points can be found in Figures 3-5 and 11-12) is assigned a record (the data points in the distribution graph correspond to the data records such as the graph display data records in Fig. 3). Appellant admits that the graph of Tabei's Figure 11 comprises a plurality of adjacent data points. However, Appellant argues that not every possible data point in the graph is assigned a record. This argument cannot be found in the claim set forth in the Claim 1. The Appellant further argues that many unassigned data points exist between the plotted records in Tabei's Fig. 11. However, this argument is irrelevant to the claim limitation set forth in the claim 1 because the claim 1 is broadly construed and the Appellant's argument is not found in the claim 1.

Appellant is trying to argue that Tabei's distribution graph has some unassigned data points because in Tabei, the data points in the graph are data dependent. However, in contrary to what has been stated in Appellant's argument, the claim limitation does not specifically recite that every data point in the graph is assigned a record. The claim 1 instead recites, "each adjacent data point is assigned a record." Tabei teaches the claim limitation set forth in the claim 1 because Appellant agrees that Tabei teaches a plurality of adjacent data points in the distribution graph and the Examiner asserts that each adjacent data point is assigned a record because in Tabei there is one-to-one correspondence between the database items or database records and the adjacent data points in the distribution graph.

Since Tabei teaches a plurality of adjacent data points in the graph and each adjacent data point is assigned a record, Tabei teaches the claim limitation as recited in the claim 1. Although

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Tabei's distribution graph has some unassigned data points, Tabei still teaches each adjacent data point in the graph is assigned a record. Although Tabei's graph has some unassigned data points, this is because the graph is drawn for only a limited number of records, Tabei is capable of drawing every data point or every pixel in the graph for a large number of records representing a wide range of data items selected from the database. Tabei therefore fulfills the claim 1.

In the remarks, the Appellant argued with respect to the claim 31 in substance:

(B) "Tabei does not teach assigning records to every pixel in the columns of a pixel bar chart."

In response to the arguments in (B), the data points plotted in Tabei's graph are data dependent, i.e., the distribution of the data points depends on the data items retrieved from the database as well as the retrieval conditions. Based on the data items retrieved from the database, Tabei's graph is capable of drawing every data point in the graph and that every data point corresponds to a record, especially in situation when Tabei plots a large set of data from the database representing a wide range of data values wherein every data point or every pixel is assigned a record. From page 9, lines 13-16 of the Appellant's specification, a record is represented by a unique pixel in a display or a record is represented by a data point and each data point comprises a plurality of pixels. In Tabei, a record is represented by a unique pixel in a display and every pixel in the graph is plotted for records in a large set of records.

Although Figures 3-5, and 11-12 of Tabei only show a limited number of data points in each graph, for a limited number of records, Tabei is capable of drawing every data point or

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every pixel in the graph for a large number of records representing a wide range of data items selected from the database. Therefore, Tabei teaches assigning records to every pixel in the columns of the distribution graph.

Finally, it is noted that the “pixel bar chart” is interpreted as the “distribution graph” of Tabei (See, for example, column 6, lines 45-55 of Tabei wherein Tabei teaches a pixel bar chart).

In the remarks, the Appellant argued with respect to the claim 31 in substance:

(C) “The claimed method comprises ‘determining a width of each of the columns, the width of some columns being different than the width of other columns; assigning records to every pixel in said columns; and applying a variable color to all of the pixels in all of the columns according to an attribute of said records.’ Tabei does not teach or suggest this combination of limitations.”

In response to the arguments in (C), the Examiner asserts that Tabei teaches determining a width of each of the columns because Tabei teaches in column 5-6 determining the width of each of the columns, i.e., the width of the x-axis, y-axis in the graph drawing region, wherein the scaled values are calculated based on the actual values of database items such as gross margin and sales. Tabei teaches designating a retrieval range on the distribution graph (See column 6, lines 40-45 and Figure 12 wherein the retrieval ranges are designated or selected). Therefore, Tabei is capable of designating a variable width of the retrieved columns which are different than the width of some of the other columns.

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Although Tabei has fixed width for the columns displayed in the Figures 3-5 and 11-12, a user is able to change the width of the retrieved columns as indicated in Figure 12 and column 6, lines 40-45, wherein a user inputs the *designated retrieval range for the retrieval columns*.

Therefore, *Tabei at least teaches or suggests the claim limitation of "determining a width of each of the columns, the width of some columns being different than the width of other columns"* because a *variable width for each retrieval column is either determined based on the calculation or is input based on the user's designation wherein a variable width of the retrieved columns are different than the width of some of the other columns by user's designation*.

Tabei further teaches the claim limitation of "assigning records to every pixel in said columns". This teaching of Tabei has been specifically addressed in the Examiner's response to the arguments in (B).

Finally, Tabei teaches the claim limitation of "applying a variable color to all of the pixels in all of the columns according to an attribute of said records". This is because Tabei teaches in Figures 11-12 changing the plot color of the record data when a user input a narrowing retrieving condition (See column 10 for details). The plot color can be yellow or blue. The attribute of the records are thus designated by the narrowing conditions and the plot color such as yellow or blue is being applied to all of the pixels in all of the columns that correspond to the data records retrieved.

In summary, Tabei therefore teaches or suggests the claim limitation set forth in the Claim 31.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

Jin-Cheng Wang

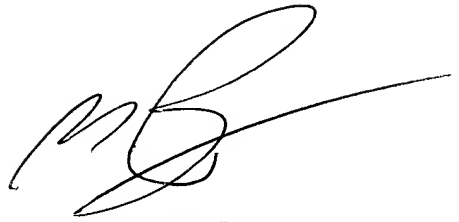
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